

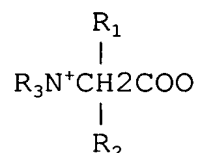
CLAIMS

1. (Canceled)
2. (Canceled)
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15. (Canceled)
16. (Canceled)
17. (Canceled)
18. (Canceled)

19. (Previously Amended) A method of fracturing a subterranean formation comprising the steps of:

providing a visco-elastic surfactant based hydraulic fracturing fluid comprising:

(i) a surfactant having the general formula



wherein R_1 - R_2 are each an aliphatic group of C1-C4, branched or straight chained, saturated or unsaturated, R_3 is a group of C12-C22, branched, straight chained or cyclic, saturated or unsaturated;

(ii) a water soluble or dispersible anionic organic or inorganic salt;

(iii) an acid; and

(iv) a low molecular weight organic solvent, and;

pumping said fracturing fluid through a well bore and into a subterranean formation at a sufficient pressure to cause fracturing of said formation including the further step of lowering the viscosity of said fluid by raising the pH thereof.

20. (Original) A method as claimed in claim 19, wherein said pH is raised by the addition of an alkaline compound selected from the group including carbonates, oxides, and amines.

21. (Cancelled)

22. (Cancelled)

23. (New) A method as claimed in claim 19, wherein said ratio of said salt to said surfactant is in the range of 1:4 to 1:2.

24. (New) A method as claimed in claim 23, wherein said salt is selected from the group consisting of potassium xylene sulfonate, sodium xylene sulfonate, ammonium xylene sulfonate, zinc xylene sulfonate, magnesium xylene sulfonate, sodium toluene sulfonate, potassium toluene sulfonate, zinc toluene sulfonate, ammonium toluene sulfonate, magnesium toluene sulfonate, NaCl and KCl.

25. (New) A method as claimed in claim 23, wherein said acid is selected from the group consisting of formic acid, citric acid, hydrochloric acid and acetic acid.

26. (New) A method as claimed in claim 23, wherein said organic solvent is a low molecular weight alcohol.

27. (New) A method as claimed in claim 26, wherein said surfactant is present in a quantity of about 0.1% (wt) to about 5.0% (wt).

28. (New) A method as claimed in claim 27, wherein said hydraulic fracturing fluid is in the form of a foam including about 52 to about 95% liquified gas selected from the group including CO₂, N₂, air and low molecular weight hydrocarbons.

29. (New) A method as claimed in claim 28, wherein said hydraulic fracturing fluid contains 10-200 standard cubic metres of N₂ per cubic metre of fluid.

30. (New) A method as claimed in claim 28, wherein said hydraulic fracturing fluid contains 10-200 standard cubic metres of gaseous CO₂ per cubic metre of fluid or the liquid equivalent.